



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,138	06/15/2001	Joseph P. Donahue	45223/TJD/O125	9249

7590 10/03/2005
Carmody & Torrance
50 Leavenworthy Street
P.O.Box 1110
Waterbury, CO 06721-1110

EXAMINER

AMINI, JAVID A

ART UNIT	PAPER NUMBER
----------	--------------

2672

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,138

Applicant(s)

DONAHUE ET AL.

Examiner

Javid A. Amini

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-10 and 12-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing-sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

Applicant's arguments with respect to claims 1, 3-4, 6-10, 12-40 has been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4, 6-10, 12-40 rejected under 35 U.S.C. 103(a) as being unpatentable over Kanno et al. (hereinafter refers as Kanno) and further in view of Ohnishi et al. (hereinafter referred as Ohnishi).

1. Claims 1, 19, 22, 28.

Kanno in fig. 36 illustrates the step of "A method for combining at least two adjacent image segments to form a larger composite image (Kanno in fig. 1 part number 44 illustrates a drum) on a photosensitive surface comprising".

Kanno in figs. 4 and 5 illustrates four adjacent image segments, each image segment includes a buffer region e.g. in fig. 4, memory addresses 4676, 4677, ... 18708. Kanno in fig. 3 illustrates a high pass filter section 96c for highlighting edges of the image, a gamma correction section 96d for correcting the recording density characteristic of the printer section 6 and a gradation processing section 96e for binary-coding an 8-bit signal while maintaining the gradient and the character gradient so as to convert the signal into a 1-bit signal, as Applicant claims

Art Unit: 2672

“establishing a first region on the photosensitive surface in which a first image segment will be printed; wherein the first image segment includes a buffer region comprising a plurality of pixels that overlap both the first image segment and an adjacent second image segment”.

Kanno in figs. 22 and 23 illustrates that the synthesized image send to memory 98 in fig. 2 and it can be printed into printer section 6. “Printing, with a printing device, the first image segment onto the first region of the photosensitive surface, including the buffer region, while modifying the intensity of the pixels printed in the buffer region by a first ramp value”. Kanno does not explicitly specify the overlapping regions i.e. the differential intensity, however in figs. 3-4 illustrates the memory addresses that are corrected by gamma correction section.

The following step is obvious because Kanno in figs. 4 and 5 illustrates the step: “establishing a second region on the photosensitive surface in which the second image segment will be printed adjacent to the first image segment”. Kanno at col. 7, lines 25-46 discloses that the printer section 6 has the photosensitive drum 44 serving as an image carrier disposed in the substantially central portion of the apparatus body 10. The outer surface of the photosensitive drum 44 is exposed by the laser beam supplied from the laser exposure section 40 so that a required latent image is formed. The following elements are sequentially disposed around the photosensitive drum 44: an electrifying charger 45 for electrically charging the outer surface of the photosensitive drum 44 to a predetermined charge level; a developing unit 46 for supplying toner serving as a developer to the latent image formed on the outer surface of the photosensitive drum 44 to develop the latent image with a required image density; a transfer charger 48 integrally comprising a separation charger 47 for separating a member, to which an image must be transferred, that is, copy sheet P, from the photosensitive drum 44 and arranged

Art Unit: 2672

to transfer a toner image formed on the photosensitive drum 44 to the paper P; a separation claw 49 for separating the copy paper P from the outer surface of the photosensitive drum 44; a cleaning section 50 for cleaning up toner left on the outer surface of the photosensitive drum 44; and a destaticizer 51 for destaticizing the outer surface of the photosensitive drum 44. See following step: “indexing at least one of the printing device and the photosensitive surface relative to one another to print the second image segment on the photosensitive surface”.

Applicant does not specify the first and second image segments print simultaneously or print at the different time from each other. Kanno in figs. 35 and 36 illustrates sheet B (reverse side) i.e. equivalent to the second image segment in the claim invention, print side by side with the sheet A (right side) i.e. equivalent to the first image segment in the claim invention. The modified the intensity of the pixels in the claim invention can be equivalent to Kanno's fig. 3 section 96d, i.e. gamma correction section. See following step of the claim: “printing, with the printing device, the second image segment, including the buffer region onto the second area of the photosensitive surface, while modifying the intensity of the pixels printed in the buffer region by a second ramp value”. Kanno does not explicitly specify, *id.* the overlapping or the ramp value that corrects the edges. Kanno in fig. 3 illustrates the gamma correction section, i.e. equivalent of an adjustment to the light intensity (brightness) of a monitor or printer in order to match the output more closely to the original image. Kanno in figs. 35 and 36 illustrates that the plural original images are combined into one composite image, i.e. formed the larger composite image, see following step of the claim: “whereby the first image segment and the second image segment substantially overlap in the buffer region to form the larger composite image on the photosensitive surface”.

Art Unit: 2672

Ohnishi at col. 33, lines 25-34 discloses that the image data sequentially read out from the memories are subjected to parallel processing. Finally, the selector 4190 completes the layout of the images, and the parallel image data is then converted into serial image data again. An image signal 9330 converted into serial image data by the selector 4190 is subjected to edge emphasis and smoothing by an edge filter circuit 4180. The processed image signal passes through an LUT 4200 and is input to the selector 4230 through a signal line 9380. See fig. 37f and 37 g. The motivation for a person skill in the art to combine Ohnishi's invention into Kanno's invention is as follows: Ohnishi in fig. 27B-1 illustrates an edge filter circuit 4180, that image signal 9330 converted into serial image data by the selector 4190 is subjected to edge emphasis and smoothing by an edge filter circuit 4180. The processed image signal passes through an LUT 4200 and is input to the selector 4230 through a signal line 9380. Since the first reference Kanno does not explicitly specify an edge filter can filter the overlapping area, by modifying Kanno's fig. 2 section 97 with the edge filter circuit 4180, the person skill in the art can be printed form of larger composite image on the photosensitive surface, see Ohnishi's fig. 37G.

2. Claim 3, 20

The step is obvious; because the ramp values should be face to face, see Kanno's fig. 20B.

3. Claims 4, 21.

The step is obvious, because it does not provide a significant reason to substantially full scale.

4. Claims 6-10.

The step is obvious, because of the conversion between the intensity and the amplitude of a beam.

Art Unit: 2672

5. Claims 12, 24-27, 33.

Applicant should explicitly specify what would be the phenomenon of modulation of an electromagnetic wave by an acoustic wave? Is that how Applicant calculated the noise?

6. Claim 13.

Kanno in fig. 2 illustrates main control section, scanner section and printer section.

7. Claims 14-18.

Kanno in fig. 1 illustrates the laser exposure section 40 has a semiconductor laser 41 serving as the light source, a polygonal mirror 36 serving as a scan member for successively deflecting laser beams emitted from the semiconductor laser 41, a polygon-mirror motor 37 serving as a scan motor for rotating the polygonal mirror 36 at a predetermined number of revolutions to be described later and an optical system 42 for deflecting the laser beam supplied from the polygonal mirror 36 to introduce the deflected laser beam into the surface of a photosensitive drum 44 to be described later. The laser exposure section 40 having the above-mentioned structure is secured and supported by a support frame (not shown) of the apparatus body 10.

8. Claim 30.

The step of the intensity value is computed from a ramp rate is obvious, because the ramp value is also computed from the beam intensity. The integrator then calculates an intensity value by integrating between the zero and positive values. Meaning the zero value is equal to no beam intensity, while Applicant discloses in the specification on page line 13, that the integrator then calculates an intensity value by integrating between positive or negative values. Examiner's note: It is not clear what Applicant means by the negative value?

9. Claim 31.

Art Unit: 2672

The step is obvious, because the frequency of the output signal is an exact multiple of the input frequency. Applicant does not specify what kind of multiplier used in a conversion scenario?

10. Claims 32 and 23.

The step is obvious, because amplitude modulation (AM) is the modulation method used in the AM radio broadcast band. In this system the intensity, or amplitude, of the carrier wave varies in accordance with the modulating signal. When the carrier is thus modulated, a fraction of the power is converted to sidebands extending above and below the carrier frequency by an amount equal to the highest modulating frequency.

11. Claim 34.

The step is obvious, because phase modulation (PM) is a form of modulation which represents information as variations in the instantaneous phase of a carrier wave.

12. Claim 35.

The step of claim invention is obvious, because In frequency modulation (FM), the frequency of the carrier wave is varied in such a way that the change in frequency at any instant is proportional to another signal that varies with time. Its principal application is also in radio, where it offers increased noise immunity and decreased distortion over the AM transmissions at the expense of greatly increased bandwidth. The FM band has become the choice of music listeners because of its low-noise, wide-bandwidth qualities; it is also used for the audio portion of a television broadcast.

13. Claim 36.

Art Unit: 2672

The step is obvious, because (Pulse Code Modulation), PCM is the primary way analog signals are converted into digital form by taking samples of the waveforms from 8 to 192 thousand times per second (8 to 192kHz) and recording each sample as a digital number from 8 to 24 bits long. PCM data are raw digital audio samples

14. Claim 37.

See rejection of claim 1.

15. Claims 38-40,

Regarding claim 38, the step is obvious, because the width of the image segment must be equal or less than to a maximum width of the printing device. Re. claims 39-40, the step is obvious, because the printing device can be considered as a raster output scanner.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

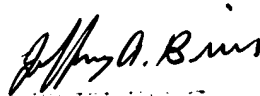
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2672

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JEFFERSON
PRIMARY EXAMINER

Javid A Amini
Examiner
Art Unit 2672

Javid Amini